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PHARM.

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PURDUE UNIVERSITY,

Lafayette, Ind.
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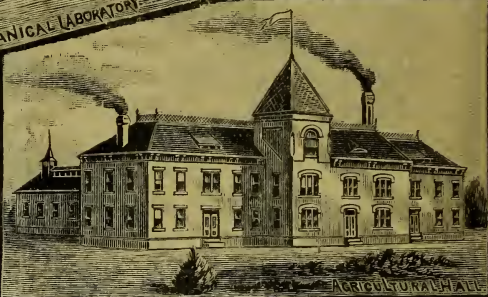
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ENGINE HOUSE



MECHANICAL LABORATORY



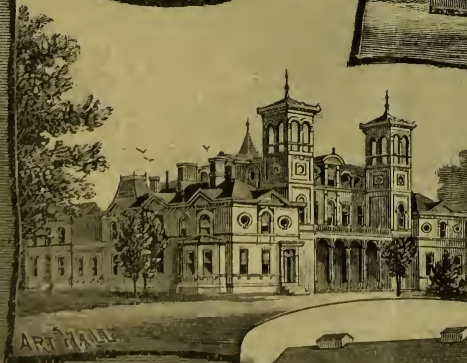
AGRICULTURAL HALL



UNIVERSITY HALL



MENS DORMITORY



ART HALL



CHEMICAL LABORATORY



GYMNASIUM

➤ PURDUE UNIVERSITY BUILDINGS ➤

Lafayette, Ind.

PURDUE UNIVERSITY.

SIXTH ANNUAL ANNOUNCEMENT

OF THE

SCHOOL OF PHARMACY,

—1889-90.—

INDIANAPOLIS:

WM. E. BURFORD, CONTRACTOR FOR PRINTING AND BINDING
1889.

TRUSTEES.

ALFRED P. EDGERTON,	-	-	-	-	-	Fort Wayne.
SAMUEL HARGROVE,	-	-	-	-	-	Princeton.
WILLIAM A. BANKS,	-	-	-	-	-	Door Village.
CHARLES B. STUART,	-	-	-	-	-	Lafayette.
ADDISON BYBEE,	-	-	-	-	-	Indianapolis.
WILLIAM H. RAGAN,	-	-	-	-	-	Greencastle.

CALENDAR 1889-90.

September 17, 1889. Examination for Admission.

September 18, 1889. Lectures begin in School of Pharmacy.

December 21, 1889, to January 7, 1890. Christmas Holidays.

March 21, 1890. Close of Session in School of Pharmacy.

FACULTY FOR 1888-89.

JAMES H. SMART, A. M., LL.D.,
President of the University.

ARTHUR L. GREEN, PH. C.,
Dean, and Professor of Pharmacy.

JOHN U. NEF, A. B., PH. D.,
Professor of Chemistry.

STANLEY COULTER, A. M.,
Professor of Biology.

OTTO G. ZERSE, PH. C.,
Special Lecturer on Materia Medica.

*JOHN H. SHAPER, PH. C.,
Instructor in Pharmacy.

STATE EXAMINERS.

JOHN N. HURTY, INDIANAPOLIS.

GEO. W. SLOAN, INDIANAPOLIS.

LEO ELIEL, SOUTH BEND.

* GEORGE SPITZER, 1889 and 1890.

SIXTH ANNUAL ANNOUNCEMENT. 1889-90.

The School of Pharmacy affords a thorough and practical training in pharmacy, chemistry and related subjects. Students are engaged seven or eight hours a day at the University. The morning hours are given to microscopical, prescription and cabinet work, together with lectures and recitations. Students are engaged in chemical and pharmaceutical work in the laboratory from 12:30 to 5:30 five days every week.

Special attention is called to the large amount of required laboratory work, much more than is usually required in schools of pharmacy. The required laboratory work in the preparation of medicines alone being twenty-five hours a week for seventeen weeks.

Instruction includes a Junior and Senior Course of twenty-four weeks each. Women will be admitted on the same conditions as men.

The instruction as arranged affords an excellent preparatory course for those who anticipate attending a school of medicine.

The required work is outlined below :

COURSES OF STUDY.

Courses.	SUBJECTS.	No. of Hours in Lecture Room	No. of Hours in Laboratory.
JUNIOR.	1. Experimental Chemistry	40	40
	2. Qualitative Analysis	45	285
	3. Inorganic Chemistry	42	42
	4. Galenical Preparations	30	150
	5. Inorganic Pharmaceutical Preparations	25	125
	6. Pharmacognosy	24	24
	7. Materia Medica	24	24
	8. Human Anatomy and Physiology	10	28
	9. Doses	24	24
	10. Pharmaceutical Problems	16	16
	11. Strength and Composition of Medicines	20	20
	Total hours for the course	236	652
	Average per week	37	37
SENIOR.	12. Organic Pharmaceutical Preparations	12	150
	13. Toxicology	6	75
	14. Organic Qualitative Analysis	4	50
	15. Analysis of Urine	4	50
	16. Quantitative Analysis	16	200
	17. Pharmaceutical Assaying	6	75
	18. Organic Chemistry	60	60
	19. Pharmacognosy	24	24
	20. Materia Medica	24	24
	21. Pharmaceutical Synonyms	24	24
	22. Botany	24	24
	23. Foods	12	12
	24. Prescription Work	24	96
	Total hours for the course	216	744
	Average per week	40	40

77
 24
 308
 1848
 508
 1340

JUNIOR COURSE.

1. **EXPERIMENTAL CHEMISTRY.**—The preparation of hydrogen, oxygen, and other gases, with the study of their properties. The preparation of salts. Introductory lectures on chemistry.

2. **QUALITATIVE ANALYSIS.**—Chemical notation. Rules for the incompatibilities of inorganic substances. Writing of chemical equations. Directions for laboratory work.

In the chemical laboratory each student learns to detect the more common inorganic acids and bases, working with both known and unknown material.

3. **INORGANIC CHEMISTRY.**—Recitations and lectures on the sources of inorganic drugs, their uses and general practical applications.

4. **GALENICAL PREPARATIONS.**—Lectures and recitations on the preparation of pills, suppositories, syrups, elixirs, emulsions, fluid extracts, extracts, abstracts and other galenical preparations. Directions are given for laboratory work.

In laboratory each student, independently, prepares 7 samples of pills, 1 cerate, 2 liniments, 2 glycerites, 2 powders, 3 spirits, 2 mucilages, 2 mixtures, 4 samples of suppositories, 1 infusion, 1 decoction, 1 vinegar, 4 solutions, 1 confection, 1 honey, 4 syrups, 2 elixirs, 4 samples of troches, 3 ointments, 3 tinctures, 3 waters, 8 emulsions, 3 plasters, 6 fluid extracts, 4 extracts, 1 abstract, 1 mass and 1 oleate. Students who have already acquired special skill in making any of the above kinds of preparations will be provided with other work.

5. **INORGANIC PHARMACEUTICAL PREPARATIONS.**—Lectures on distillations, sublimation, crystallization and purification of chemicals. Special attention is given to their impurities, pharmaceutical standards and tests. Directions are given for laboratory work.

In the laboratory each student, independently, prepares light magnesium carbonate, heavy magnesium carbonate, calcium oxide, red oxide of mercury, yellow oxide of mercury, sulphurated potassa, green iodide of mercury, dried sulphate of iron, potassium iodide, sodium bromide, precipitated sulphur, ammo-

nium iodide, calcium hypophosphite, zinc acetate, potassium citrate, hydrobromic acid, hydriodic acid, sulphurous acid, nitric acid, zinc chloride, potassium hydrate and hydrochloric acid.

6. PHARMACOGNOSY.—Students will examine cabinet specimens of the more common vegetable drugs, being required to recognize them at once by inspection, giving the Latin and English names.

7. MATERIA MEDICA.—Recitations on the physiological and therapeutical action of medicines.

8. HUMAN ANATOMY AND PHYSIOLOGY.—The instruction in this subject comprises:

1. *A Series of Lectures* upon anatomy with a brief discussion of the functions of the various parts. Frequent quizzes and written tests are given during the course.

2. *Laboratory Work*, in which the students investigate for themselves the mammalian structure. In this work it is required that the student demonstrate, so far as the time permits, the points given in the lectures.

9. DOSES.—Students are drilled thoroughly on the doses of crude drugs and preparations.

10. PHARMACEUTICAL PROBLEMS.—A study of the English and metric systems; practical examples in manufacturing chemistry.

11. STRENGTH AND COMPOSITION OF MEDICINES.—Students are required to learn the principal constituents and percentage composition of the more important preparations.

SENIOR COURSE.

12. ORGANIC PHARMACEUTICAL PREPARATIONS.—Pharmacopœial standards and tests of organic preparations; recitations on laboratory work.

In the laboratory each student independently prepares ethyl acetate, ethyl nitrite, ether, chloroform, alcohol, iodoform, nitrobenzole, anilin, acetanilid, tartaric acid, oleic acid, benzoic acid, gallic acid, one oleate, one oleoresin, resin of podophyllum, a volatile alkaloid (nicotin), a non-volatile alkaloid (quinine), four scale preparations and a volatile oil.

13. TOXICOLOGY.—Lectures directing laboratory work; students are instructed in the use of antidotes in cases of poisoning.

Laboratory work consists in the separation and identification of the more common organic and inorganic poisons.

14. ORGANIC QUALITATIVE ANALYSIS (*Proximate*).—Lectures directing laboratory work; special attention is given to the incompatibilities of organic substances.

Students will have practice in the chemical identification of several organic compounds, working first with known and finally with unknown mixtures.

15. ANALYSIS OF URINE.—The chemical and microscopical examination of samples of urine.

16. QUANTITATIVE ANALYSIS.—The preparation of volumetric reagents, and their application in testing the strength and purity of Pharmacopœial chemicals. Gravimetric work is also given.

17. PHARMACEUTICAL ASSAYING.—Lectures and laboratory work; assays are made of opium, cinchona, aconite, belladonna and other drugs.

18. ORGANIC CHEMISTRY.—Recitations and lectures on hydrocarbons, aldehydes, ethers, compound ethers, organic acids, carbohydrates, alkaloids, glucosides, resins, gums, gum-resins, oleo-resins, balsams and oils.

19. PHARMACOGNOSY.—Students will study cabinet specimens of powdered drugs, preparations and inorganic substances, being required to recognize them at once by inspection.

20. MATERIA MEDICA.—Continuation of the work of the Junior Course.

21. PHARMACEUTICAL SYNONYMS.—Students are drilled in the Latin, English and German names of medicinal substances and their preparations.

22. BOTANY.—The instruction in this subject comprises—

1. A careful study of the compound microscope and its appliances, together with practice in mounting, sectioning, etc.

2. A study of the various tissues and tissue elements, together with practice in the application of the facts thus obtained in the detection of adulterations in drugs.

3. A study of the gross anatomy of typical plants and their organs.

23. **FOODS.**—Lectures on milk, butter, tea, coffee, water, sugar and other foods, including their composition, preparation, adulteration, analysis, preservation and healthfulness.

24. **PRESCRIPTION WORK.**—Each student is required to read and correct hundreds of prescriptions taken from the files of drug stores. The more difficult prescriptions are filled by the student in the prescription room. The reading, correcting and filling is under the personal supervision of a practical druggist.

REVIEWS.

Students are required to pass an examination in each of the following subjects of the Junior Course: Doses, Strength and Composition of Medicines and Pharmacognosy. The examination in Doses and Strength and Composition of Medicines will be required at the beginning of the Senior Course.

REQUIREMENTS FOR ADMISSION.

Candidates for admission to the Junior Class must present evidence of good moral character, and have a good knowledge of the common English branches. In arithmetic, special familiarity with denominate numbers, fractions, percentage and proportion will be required. Due weight will also be given to the applicant's penmanship and English composition. All applicants must be present for examination on Tuesday, September 17, at 9 A. M.

THE EXAMINATION IN PRACTICAL EXPERIENCE.

Besides the examinations on the lectures, an examination on the student's practical experience, proving his familiarity with such details as are best learned behind the counter, will be required for graduation.

GRADUATION.

The degree of Graduate in Pharmacy (Ph. G.) will be conferred upon each student not less than twenty-one years of age who successfully completes the required course.

Those who complete the Senior Course, passing all examinations upon the course of instruction, who are under twenty-one years of age, or have not fulfilled the requirements of practical

experience in a dispensing pharmacy, may return for examination in pharmaceutical practice and for the usual diploma, after complying with the prescribed conditions.

ACKNOWLEDGMENTS.

The thanks of the School are tendered to the editors of the *Indiana Pharmacist*, the *Pharmaceutische Rundschau*, the *National Druggist*, the *Pharmaceutical Era*, the *Drug Clerks' Journal*, the *National Druggist*, the *Rocky Mountain Druggist* and *Meyer Bros. Druggists* for a complimentary copy of their respective journals. Also to Eli Lilly & Co. for samples of drugs and preparations; to Samuel Kennedy for several samples of pigments.

APPLIANCES.

All needed supplies are furnished, including perculators, mortars, pill machines, and other pharmaceutical utensils, besides all needed drugs and chemicals.

Students in botany have the free use of simple and compound microscopes.

All the important pharmaceutical and chemical journals in the English language are kept on file for the use of the student.

Most of the standard works of reference in pharmacy and chemistry are accessible to students, under certain restrictions.

The Annual Register of Purdue University, containing full information of the various courses, laboratories and museums, will be sent on application.

PRESCRIPTION ROOM.

Special attention is called to our prescription department. A separate room will be fitted up as a dispensing pharmacy and used by the students in filling prescriptions. It is the purpose to make the School as practical as possible.

MUSEUM.

The school is well supplied with cabinets of crude vegetable drugs, inorganic materials and pharmaceutical preparations. These cabinets are accessible to students at all hours of the day. The student not only examines these samples as a matter of interest, but he is required to recognize them through a series of continued examinations.

TEXT BOOKS.

The following text books (the latest editions) will be used:

Junior Course—

Remington's Practice of Pharmacy.

Clowes' Practical and Analytical Chemistry.

Bloxam's Chemistry, Inorganic and Organic, with Experiments.

Senior Course—

Lyons' Pharmaceutical Assaying.

Tyson's Practical Examinations of Urine.

Sexton's Quantitative Analysis.

ALUMNI.

1886.

ERNEST G. EBERHARDT, analytical chemist for Eli Lilly & Co. until 1888; at present assistant superintendent for the same house.

MANUEL JAY, in the firm of Jay & Mikels, Stockwell, Ind.

JOHN KENNEDY, in charge of prescription department of R. G. Moore, Vincennes, Ind.

EDWIN J. MOWRY, in the firm of Rader & Mowry, Oskaloosa, Iowa, until 1888. At present in pharmacy, as proprietor, Columbia City, Ind.

LOUIS H. SCHULMEYER, prescription clerk with John E. Hendricks, Indianapolis.

BERT D. WESTENFELDER, formerly prescription clerk with Emil Martin, Indianapolis. At present chemist to the American Starch Company, Columbus, Ind.

EMORY J. YEAGER, prescription clerk with Dr. A. A. Wells, Lafayette, Ind.

1887.

MILLARD CALDWELL, prescription clerk with B. G. Moore, Hartford City, Ind.

WILLIAM HURTLEY DICKINSON, formerly manufacturing chemist with Plummer, Morrison & Co. At present clerking. Address, 537 West Lake St., Chicago.

CHARLES LUTHER HACKETT, in the firm of John Hackett & Son, Roanoke, Ind.

WILLIAM McOWEN ROSS, clerking in Richmond, Ind.

ALBERT WARREN SHOUP, in firm of Wells & Shoup, West Lafayette, Ind.

1888.

PETER H. FETTERS, in firm of Fetters & Morrison, Indianapolis.

SAMUEL KENNEDY, with E. Haworth, Lafayette, Ind.

GEORGE C. MORRISON, in firm of Fetters & Morrison, Indianapolis.

WILLIAM H. VAWTER, manufacturing chemist with Eli Lilly & Co., Indianapolis.

STUDENTS 1888-89.

SENIORS.

ADEN L. CAVINS	Bloomfield.
HENRY HERSCHEL HARRIS.	Boswell.
LUTHER JEWETT HORD	Shelbyville.
DALL L. MABIE.	Warsaw.
MERIT POST.	Lowell.
CHARLES WILLIAM SHAFER	Morocco.
GEORGE SPITZER.	Bluffton.
CORLICE M. WARNER	Edinburg.
DON CARLTON WHITEHEAD	Maumee, Ohio.
Total, 9.	

JUNIORS.

ROBERT W. ALLEN	Brookston.
MOSES F. BOGGS.	Lafayette.
DAVID A. CANINE.	Waveland.
BERT. CRITZ.	Newtown.
WILLIAM C. DECK	Bowers.
WILLIAM E. EASTERDAY	Vandalia, Ill.
BEECHER FIGG	Spencer.
JOSEPH L. FEIBLEMAN	Indianapolis.
WILLIAM J. HART	DeForest.
CHARLES A JOHNSON	Crawfordsville.
GEORGE W. LACEY	Lafayette.
FRANK M. LEE	Indianapolis.
ALVIN H. LEESER.	Ft. Wayne.
HENRY W. MEINZEN	Ft. Wayne.
FRANK RIGGS	Fairbanks.
CHARLES S. ROBERTS	North Baltimore, Ohio
MARION A. STOUT.	Bluffton.
FRANK E. SHATTUCK	Bloomfield.
CHARLES W. WATKINS	Lafayette.
CLARANCE A. ZERSE.	Danville, Ill.
Total, 20.	

EXPENSES.

Tuition is free, and the expenses are, therefore, far less than in the majority of similar schools, while unusual facilities are afforded for laboratory practice.

The fees are as follows, payable in advance, except one-half of the fee for chemicals and gas, which is payable January 7, 1890 :

Entrance fee, per year.....	\$5 00
Incidentals, per year	6 00
Chemicals and gas for twenty-four weeks.....	24 00

There will also be charges for breakage. To cover such expenses, a laboratory deposit of \$10.00 is required at the time of admission.

Good board and rooms may be had for \$3.25 per week ; \$134 should cover the total expense of board, room rent, fuel, fees, books and washing for twenty-four weeks.

Correspondence may be addressed to Purdue School of Pharmacy, Lafayette, Indiana. .



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